



**Infectious Disease Epidemiology Section**  
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## **CAT SCRATCH DISEASE**

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Cat-scratch disease (CSD) is a subacute, usually self-limited bacterial disease most often caused by *Bartonella henselae*. *Bartonella henselae* is closely related to *Bartonella quintana*, the agent of trench fever and also a cause of bacillary angiomatosis.

### **Epidemiology**

CSD is probably relatively common, but the true incidence is unknown. Approximately 80% of cases occur in people under 20 years of age.

Over 90% of patients report a history of recent contact with cats or kittens, which usually appear healthy. Transmission seems to be a result of a scratch, bite, lick, or other exposure to a healthy, usually young cat. Other animals, such as dogs, monkeys, rabbits, chickens, and horses, may be possible sources, but this is not confirmed. Cat fleas are another possible, but unproven, source of infection.

Transmission from person to person does not occur.

The incubation period from the time of the scratch to the appearance of the primary cutaneous lesion, is 7 to 12 days and 5 to 50 days (median 12 days) from appearance of the primary lesion to appearance of lymphadenopathy.

### **Clinical Description**

- The main sign of cat-scratch disease (CSD) is regional lymphadenopathy in an immunocompetent person. It involves nodes that drain the site of inoculation and may include cervical, axillary, epitrochlear, or inguinal nodes. The area around affected lymph nodes typically is tender, warm, erythematous, and indurated. The affected nodes may suppurate spontaneously.
- Fever and mild systemic symptoms occur in 30% of patients.
- A skin papule often is found at the presumed site of bacterial inoculation preceding the development of lymphadenopathy by 1 to 2 weeks.
- Rarely encephalitis, aseptic meningitis, fever of unknown origin, neuroretinitis, osteolytic lesions, hepatitis, microabscesses in the liver and spleen, pneumonia, thrombocytopenic purpura, and erythema nodosum.

CSD can be confused clinically with other diseases that cause regional lymphadenopathy (such as tularemia, brucellosis, tuberculosis, and plague).

### **Laboratory Tests**

A case of cat scratch disease is confirmed by

- Indirect fluorescent antibody test or EIA testing for detection of serum antibody to antigens of *Bartonella* or *Rochalimaea* species. This is available through the State Laboratory. The testing is either

performed in the State Laboratory with Centers for Disease Control (CDC) reagents or referred to the CDC for testing.

2. The organism may be identified by Warthin-Starry silver impregnation stain in lymph node, skin, or conjunctival tissue.

### **Surveillance**

Cat Scratch Disease is not a reportable condition.

**Case Definition:** To be used in case of an outbreak.

A confirmed case of CSD is defined as a symptomatic individual with laboratory confirmation of a *Bartonella* species in serum or tissue.

A probable case is a clinical case epidemiologically linked to a confirmed case.

### **Investigation**

No action is necessary unless an outbreak is suspected. While CSD is not a reportable condition, sporadic or cluster cases may warrant further public health attention..

### **Case Management – Treatment**

- Treatment is primarily supportive since the disease usually is self-limited, resolving spontaneously in 2 to 4 months. Painful suppurative nodes can be treated with needle aspiration for relief of symptoms; surgical excision generally is unnecessary.
- Antibiotic therapy may be considered for acutely or severely ill patients with systemic symptoms,
- Disinfection of discharges from purulent lesions.
- Infection usually resolves spontaneously in 2 to 4 months, but antibiotics should be considered for acutely ill patients and those who have HIV/AIDS.

**Hospital precaution and isolation:** Standard precautions

### **Prevention of transmission**

Persons should avoid playing roughly with cats and kittens to minimize cat-induced scratches and bites. Persons with immune deficiencies should avoid contact with cats that scratch or bite, and when obtaining a new pet, they should avoid cats younger than 1 year of age. Immunocompromised persons should wash immediately sites of cat scratches or bites and should not allow cats to lick their open cuts or wounds. Care of cats should include flea control. Testing of cats for *Bartonella* infection is not recommended.